Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (currently amended): A method for detecting early fires in a predetermined area, the method comprising:

(a) capturing a plurality of images of the predetermined area during an interval for generating a plurality of difference frames;

(b) detecting a number of pixels that have fire characteristics in each difference frame by determining if each pixel of each difference frame satisfies the relationship R>Rt, where R is a value of a red component of the pixel and Rt is a threshold of the red component; and

(c) if the result of step (b) indicates that a flame in the predetermined area substantially increases during the interval, outputting an early fire alarm.

2 (currently amended): The method of claim 1 wherein determining the number of pixels that have fire characteristics in each difference frame further comprises ~~step (b) includes:~~ determining if each pixel of each difference frame ~~complies with the following rules~~ satisfies the relationship $R \geqq G > B$, where G is a value of a green component of the pixel and B is a value of a blue component of the pixel. ~~÷~~

~~R>Rt;~~

~~$R \geqq G > B$; and~~

~~$S \geqq ((255-R)*St/Rt)$;~~

~~wherein R is a value of a red component of the pixel, Rt is a threshold of the red component, G is a value of a green component of the pixel, B is a value of a blue component of the pixel, S is saturation of the pixel, St is a threshold of saturation;~~

~~and~~

~~if a pixel complies with the above rules, adjusting the number of pixels that have fire characteristics of the difference frame.~~

3 (cancelled).

4 (original): The method of claim 1 wherein in step (c), if the result of step (b) indicates that a ratio of spreading flame in the predetermined area is over a threshold of spreading flame during the interval, then outputting the early fire alarm.

5 (currently amended): The method of claim 1 wherein step (a) ~~including~~ includes:

comparing two images captured for generating a difference of the two images; and

removing noise from the difference for generating a difference frame.

6 (currently amended): A method for detecting a number of pixels that have fire characteristics in a difference frame, the method comprising:

determining if each pixel of the difference frame complies with the following rules:

$R>Rt$;

$R \geqq G>B$; and

$S \geqq ((255-R)*St/Rt)$;

wherein R is a value of a red component of the pixel, Rt is a threshold of the red component, G is a value of a green component of the pixel, B is a value of a blue component of the pixel, S is saturation of the pixel, and St is a threshold of

saturation; and

if a pixel complies with the above rules, adjusting the number of pixels that have fire characteristics of the difference frame.

7 (original): The method of claim 6 wherein when the value of the red component of a pixel is Rt, the saturation of the pixel is St.

8 (original): The method of claim 6 wherein a video detecting system captures images in a predetermined area and the difference frame is generated by removing noise of a difference of two images captured by the video detecting system.

9 (currently amended): A video detecting system comprising:

an image capturing device for capturing images;

a logic unit for performing the following steps:

(a) controlling the image capturing device to capture a plurality of images of a predetermined area during an interval for generating a plurality of difference frames;

(b) detecting a number of pixels that have fire characteristics in each difference frame by determining if each pixel of each difference frame satisfies the relationship R>Rt, where R is a value of a red component of the pixel and Rt is a threshold of the red component; and

(c) if the result of step (b) indicates that a flame in the predetermined area substantially increases during the interval, outputting an early fire alarm.

10 (currently amended): The video detecting system of claim 9 wherein

determining the number of pixels that have fire characteristics in each difference frame further comprises ~~step (b) performed by the logic unit includes:~~ determining if each pixel of the difference frame satisfies the relationship $R \geqq G > B$, where G is a value of a green component of the pixel and B is a value of a blue component of the pixel. ~~complies with the following rules:~~

~~$R > Rt$;~~

~~$R \geqq G > B$; and~~

~~$S \geqq ((255-R)*St/Rt)$;~~

~~wherein R is a value of a red component of the pixel, Rt is a threshold of the red component, G is a value of a green component of the pixel, B is a value of a blue component of the pixel, S is saturation of the pixel, St is a threshold of saturation; and~~

~~if a pixel complies with the above rules, adjusting the number of pixels that have fire characteristics of the difference frame.~~

11 (cancelled).

12 (original): The video detecting system of claim 9 wherein if the result of step (b) indicates that a ratio of spreading flame in the predetermined area is over a threshold of spreading flame during the interval, the logic unit outputs the early fire alarm.

13 (original): The video detecting system of claim 9 wherein step (a) performed by the logic unit includes:

comparing two images captured for generating a difference of the

two images; and

removing noise from the difference for generating a difference frame.

14 (cancelled).

15 (original): The video detecting system of claim 9 wherein the logic unit is a program code.

16 (currently amended): A video detecting system comprising:

an image capturing device for capturing images;

a logic unit for performing the following steps:

(a) determining if pixels of difference frames complies with the following rules, the difference frames generated from images captured by the video detecting system:

$R>Rt$;

$R \geqq G>B$; and

$S \geqq ((255-R)*St/Rt)$;

wherein R is a value of a red component of the pixel, Rt is a threshold of the red component, G is a value of a green component of the pixel, B is a value of a blue component of the pixel, S is saturation of the pixel, and St is a threshold of saturation; and

(b) if a pixel complies with the above rules, adjusting a number of pixels that have fire characteristics of the difference frame.

17 (original): The video detecting system of claim 16 wherein when the value of the red component of a pixel is Rt, the saturation of the pixel is St.

18 (original): The video detecting system of claim 16 wherein step (a) performed by the logic unit includes:

comparing two images captured for generating a difference of the two images; and

removing noise from the difference for generating a difference frame.

19 (cancelled).

20 (original): The video detecting system of claim 16 wherein the logic unit is a program code.

21 (new): The method of claim 2 wherein determining the number of pixels that have fire characteristics in each difference frame further comprises determining if each pixel of each difference frame satisfies the relationship $S \geqq ((255-R)*St/Rt)$, wherein S is saturation of the pixel and St is a threshold of saturation.

22 (new): The method of claim 21 wherein when the value of the red component of a pixel is Rt, the saturation of the pixel is St.

23 (new): The video detecting system of claim 10 wherein determining the number of pixels that have fire characteristics in each difference frame further comprises determining if each pixel of each difference frame satisfies the relationship $S \geqq ((255-R)*St/Rt)$, wherein S is saturation of the pixel and St is a threshold of saturation.

24 (new): The video detecting system of claim 23 wherein when the value of the red component of a pixel is Rt, the saturation of the pixel is St.